

# **METHOD FOR SEISMIC EXPLORATION UTILIZING MOTION SENSOR AND PRESSURE SENSOR DATA**

## **Abstract**

A method is disclosed for deghosting seismic data. The data include measurements of a vertical component of particle motion and pressure. The measurements are substantially collocated and made at a plurality of spaced apart positions. The method includes transforming the data into the spatial frequency domain, and separating upgoing and downgoing wavefield components of the transformed data. Water surface multiples may also be removed by decomposing the signals made at a plurality of seismic energy source locations into upgoing and downgoing wavefields.